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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/692,286

10/23/2003

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EXAMINER

WANG, CLAIRE X

ART UNIT

PAPER NUMBER

2624

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/692,286	<b>Applicant(s)</b> KITA ET AL.	
	<b>Examiner</b> CLAIRE WANG	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicants' response to the last Office Action, filed on 12/10/2007 has been entered and made of record.
2. Applicant's amendment has necessitated new grounds of rejection. Thus, new grounds of rejection are presented in this Office Action.

### ***Response to Arguments***

3. Applicant's arguments with respect to claim 1-6 and 10-12 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Caglar et al. (US 2002/0071485 A1 hereinafter “Caglar”).

As to claim 1, Caglar teaches a method for encoding and decoding a video sequence in which a keyframe is used to bi-directionally predict frames in the sequence (video transmission; Paragraph [0001]), the method comprising, coding said keyframe independently of other frames in the sequence (frame I1 is the keyframe of the group; Fig. 14); and predicting a prior unidirectional predicted frame occurring before said keyframe using data from said keyframe and not from any other keyframe, directly or indirectly (Frame I1 is used to predict frame P3; Fig. 14); and predicting a subsequent unidirectional predicted frame occurring after the keyframe using the data from said keyframe and not from any other keyframe, directly or indirectly (Frame I1 is used to predict frame P4; Fig. 14).

As to claim 2, Caglar teaches wherein the keyframe is selected from a middle of a group of pictures to be encoded (Frame I1 is in the middle of the frame group; Fig. 14).

As to claim 3, Caglar teaches wherein the method further comprises predicting in a series all prior frames within the group of pictures that occur before the keyframe using data from the keyframe and not from any other keyframe (frames P2 and P3 are predicted only from frame I1; Fig. 14).

As to claim 4, Caglar teaches wherein the method further comprises predicting in series all subsequent frames within the group of pictures that occur after the keyframe using data from the keyframe and not from any other keyframe (frames P4 and P5 are predicted only from frame I1; Fig. 14).

As to claim 5, Caglar teaches wherein at least one prior intervening frame occurs between the keyframe and the prior frame, and wherein the method further comprises bi-directionally predicting the prior intervening frame using the data from the keyframe and data from the prior frame, without using data derived from any other keyframe (frame P2 predicted from keyframe I1 and frame P3; Fig. 14).

As to claim 6, Caglar teaches wherein at least one subsequent intervening frame occurs between the keyframe and the subsequent frame, and wherein the method further comprises bi-directionally predicting the subsequent intervening frame using the data from the keyframe and data from the subsequent frame, without using data derived from any other keyframe (frame P5 is predicted from keyframe I1 and frame P4; Fig. 14).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caglar in view of Hyodo et al. (6,021,250 hereinafter "Hyodo").

As to claim 10, Caglar teaches a method for encoding and decoding a video sequence in which a keyframe is used to bi-directionally predict frames in the sequence (video transmission; Paragraph [0001]), the method comprising, coding said keyframe independently of other frames in the sequence (frame I1 is the keyframe of the group; Fig. 14); and predicting a prior unidirectional predicted frame occurring before said keyframe using data from said keyframe and not from any other keyframe, directly or indirectly (Frame I1 is used to predict frame P3; Fig. 14); and predicting a subsequent unidirectional predicted frame occurring after the keyframe using the data from said keyframe and not from any other keyframe, directly or indirectly (Frame I1 is used to predict frame P4; Fig. 14). However, does not teach at least three P-frames are predicted from the I-frame.

Hyodo teaches an I-frame that predicts at least three P-frames (Fig. 15). Thus, Hyodo reads on the claimed at least three predicted frames. Therefore, it would have been obvious for one ordinarily skilled in the art at the time the invention was made to combine Caglar's prediction of frames using a center I-frame with Hyodo's prediction of at least three P-frames using an I-frame in order to have more prediction using one keyframe.

As to claim 11, Hyodo teaches wherein the plurality of subsequent unidirectional predicted frames comprises at least three frames (Fig. 15).

As to claim 12, Caglar teaches wherein a group of pictures consists of said keyframe and said prior and subsequent unidirectional predicted frames (Fig. 14).

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLAIRE WANG whose telephone number is (571)270-1051. The examiner can normally be reached on Mid-day flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew C Bella/  
Supervisory Patent Examiner, Art  
Unit 2676

Claire Wang  
02/26/2008